

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (currently amended) A sensor array for detecting an analyte in a fluid, said sensor array comprising:

first and second sensors, wherein said first sensor comprises a sensing region of an aligned conductive material and a nonconductive region, each of which sensors provides a different detected response in the presence of said analyte; and

means for dynamically aligning conductive material within said first sensor to obtain said aligned conductive material;

wherein said aligned conductive material comprises aligned distinct particles;

wherein said sensor array is electrically connected to a computer comprising a resident algorithm; the computer detecting said response and comparing said response to a known sensor array response profile, and

wherein the dynamically aligning means is performed exposure of the conductive material to at least one of the group consisting of: an electrical field, a thermal field, a photoelectric field, a light field, and a mechanical field.

2. (original) The sensor array for detecting an analyte in a fluid in accordance with claim 1, wherein said first and said second sensors are first and second chemically sensitive resistors, each of the chemically sensitive resistors comprising: a plurality of alternating regions comprising a nonconductive region and an aligned conductive region that is compositionally different than the nonconductive region, wherein each resistor provides an electrical path through said nonconductive region and the aligned conductive region; a first electrical resistance when contacted with a first fluid comprising an analyte at a first concentration; and a second electrical resistance when contacted with a second fluid comprising said analyte at a second different concentration.

3. (currently amended) The sensor array for detecting an analyte in a fluid in accordance with claim 1, wherein said conductive region is aligned by said dynamically

aligning means by exposure to a member selected from the group consisting of an electric field, a thermal field, a magnetic field, an electromagnetic field, a photoelectric field, a light field, a mechanical field, and combinations thereof.

4. (original) The sensor array for detecting an analyte in a fluid in accordance with claim 3, wherein said conductive region is electrically aligned.

5. (original) The sensor array for detecting an analyte in a fluid in accordance with claim 3, wherein said conductive region is magnetically aligned.

6. (original) The sensor array for detecting an analyte in a fluid in accordance with claim 3, wherein said conductive region is photolytically aligned.

7. (original) The sensor array for detecting an analyte in a fluid in accordance with claim 1, wherein said aligned conductive material is a member selected from the group consisting of metal, magnetic alloys, ceramics, oxides, intermetallic compounds, carbon black, nanoparticles and composite materials.

8. (original) The sensor array for detecting an analyte in a fluid in accordance with claim 7, wherein said conductive material comprises carbon black.

9. (original) The sensor array for detecting an analyte in a fluid in accordance with claim 7, wherein said conductive material comprises a nanoparticle.

10. (original) The sensor array for detecting an analyte in a fluid in accordance with claim 7, wherein said conductive material comprises a metal.

11. (original) The sensor array for detecting an analyte in a fluid in accordance with claim 10, wherein said metal is a member selected from the group consisting of nickel, cobalt, iron, a ferrite and their magnetic alloys.

12. (original) The sensor array for detecting an analyte in a fluid in

accordance with claim 10, wherein said metal is a coating of a substrate, said substrate is a member selected from group consisting of glass, silicon, quartz, ceramic or combination thereof.

13. (original) The sensor array for detecting an analyte in a fluid in accordance with claim 10, wherein said metal is a member selected from the group consisting of a precious metal coating and precious metal alloys.

14. (original) The sensor array for detecting an analyte in a fluid in accordance with claim 13, wherein said precious metal coating is a member selected from the group consisting of silver, gold and platinum.

15. (original) The sensor array for detecting an analyte in a fluid in accordance with claim 7, wherein said conductive region is an oxide.

16. (original) The sensor array for detecting an analyte in a fluid in accordance with claim 15, wherein said conductive region is a member selected from the group consisting of  $1n_2O_3$ ,  $SnO_2$ ,  $Na\sim Pt_3O_4$ ,  $TiO_2$  and  $BaTiO_3$ .

17. (original) The sensor array for detecting an analyte in a fluid in accordance with claim 1, wherein said aligned region is a material selected from the group consisting of copper phthalocyanine and phenothiazine.

18.-28. (canceled)

29. (currently amended) A sensor array for detecting an analyte in a fluid, said sensor array comprising:

first and second sensors, wherein said first sensor comprises a sensing region of an aligned conductive magnetic material and a nonconductive insulating region, each of which sensors provides a different detected response in the presence of said analyte; and

means for dynamically aligning conductive material within said first sensor to

obtain said aligned conductive material;

wherein said aligned conductive material comprises aligned distinct particles;

wherein said sensor array is electrically connected to a computer comprising a resident algorithm;

the computer detecting said response and comparing said response to a known sensor array response profile,

wherein the dynamically aligning means is performed exposure of the conductive material to at least one of the group consisting of: an electrical field, a thermal field, a photoelectric field, a light field, and a mechanical field.

30. (previously presented) The sensor array for detecting an analyte in a fluid in accordance with claim 29, wherein said aligned conductive magnetic material comprises iron.

31. (previously presented) The sensor array for detecting an analyte in a fluid in accordance with claim 29, wherein said nonconductive insulating region is a polymer.

32. (currently amended) A sensor array for detecting an analyte in a fluid, said sensor array comprising:

first and second sensors, wherein said first sensor comprises a sensing region of an aligned conductive material and a nonconductive region, wherein said nonconductive insulating region is a polymer, each of which sensors provides a different detected response in the presence of said analyte; and

means for dynamically aligning conductive material within said first sensor to obtain said aligned conductive material;

wherein said aligned conductive material comprises aligned distinct particles; and wherein said sensor array is electrically connected to a computer comprising a resident algorithm; the computer detecting said response and comparing said response to a known sensor array response profile,

wherein the dynamically aligning means is performed exposure of the conductive material to at least one of the group consisting of: an electrical field, a thermal

field, a photoelectric field, a light field, and a mechanical field.

33. (previously presented) The sensor array for detecting an analyte in a fluid in accordance with claim 1, wherein said nonconductive region is an organic material.

34. (previously presented) The sensor array for detecting an analyte in a fluid in accordance with claim 33, wherein said organic material is an organic polymer.

35. (previously presented) The sensor array for detecting an analyte in a fluid in accordance with claim 34, wherein said organic polymer is a carbohydrate.

36. (previously presented) The sensor array for detecting an analyte in a fluid in accordance with claim 1, wherein said analyte is a member selected from the group consisting of microorganism off-gases, fungi, bacteria, microbes, viruses, metabolites, and biomolecules.

37. (new) The sensor array for detecting an analyte in a fluid in accordance with claim 3, wherein said conductive region is aligned by said dynamically aligning means by exposure to a plurality of different polarization mechanisms having different directions and different strengths.

38. (new) The sensor array for detecting an analyte in a fluid in accordance with claim 29, wherein said conductive region is aligned by said dynamically aligning means by exposure to a plurality of different polarization mechanisms having different directions and different strengths.

39. (new) The sensor array for detecting an analyte in a fluid in accordance with claim 32, wherein said conductive region is aligned by said dynamically aligning means by exposure to a plurality of different polarization mechanisms having different directions and different strengths.

40. (New) The sensor array for detecting an analyte in a fluid in accordance with claim 1, wherein the respective nonconductive regions of the first and second sensors of the sensor array have a different concentration of a same type of nonconductive organic material with respect to each other.

41. (New) The sensor array for detecting an analyte in a fluid in accordance with claim 29, wherein the respective nonconductive regions of the first and second sensors of the sensor array have a different concentration of a same type of nonconductive organic material with respect to each other.

42. (new) The sensor array for detecting an analyte in a fluid in accordance with claim 32, wherein the respective nonconductive regions of the first and second sensors of the sensor array have a different concentration of a same type of nonconductive organic material with respect to each other.

43. (new) The sensor array for detecting an analyte in a fluid in accordance with claim 1, wherein the dynamically aligning means performs alignment of the conductive material after the sensor array has been fabricated.

44. (new) The sensor array for detecting an analyte in a fluid in accordance with claim 29, wherein the dynamically aligning means performs alignment of the conductive material after the sensor array has been fabricated.

45. (new) The sensor array for detecting an analyte in a fluid in accordance with claim 32, wherein the dynamically aligning means performs alignment of the conductive material after the sensor array has been fabricated.

46. (new) A sensor array for detecting an analyte in a fluid, said sensor array comprising:

first and second sensors, wherein said first sensor comprises a sensing region of an aligned conductive material and a nonconductive region, each of which sensors provides

- a different detected response in the presence of said analyte;
  - wherein said aligned conductive material comprises aligned distinct particles;
  - wherein said sensor array is electrically connected to a computer comprising a resident algorithm; the computer detecting said response and comparing said response to a known sensor array response profile, and
  - wherein the conductive material is non-magnetic.

47. (new) The sensor array for detecting an analyte in a fluid in accordance with claim 46, wherein the non-magnetic conductive material is selected from the group consisting of: carbon black, coke, C<sub>60</sub>, TiO<sub>2</sub>, BaTiO<sub>3</sub>, In<sub>2</sub>O<sub>3</sub>, SnO<sub>2</sub>, Na<sub>x</sub>Pt<sub>3</sub>O<sub>4</sub>, platinum, copper, gold, and silver.